

**HOMO-DOUBLY LABELED COMPOSITIONS FOR THE
DETECTION OF ENZYME ACTIVITY IN BIOLOGICAL SAMPLES**
ABSTRACT OF THE DISCLOSURE

5 The present invention provides for novel reagents whose fluorescence
changes upon cleavage or a change in conformation of a backbone. The reagents comprise a
backbone (*e.g.* nucleic acid, polypeptide, *etc.*) joining two fluorophores of the same species
whereby the fluorophores form an H-dimer resulting in quenching of the fluorescence of the
fluorophores. When the backbone is cleaved or changes conformation, the fluorophores are
10 separated, no longer forming an H-type dimer, and are de-quenched thereby providing a
detectable signal. The use of a single fluorophore rather than an "acceptor-donor"
fluorescence resonance energy transfer system offers synthesis and performance
advantages.

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